Statement of Work

Last Rev: 7/23/2015

Current Status:

Ref	Description	Resp	Goal
2a	BPO DB Migration method doc	BB	Completed
2b	LP v BPO data differences	BB	Completed
2c	Identify field/element additions	BB	Completed
2d	Prepare staging scripts / SSIS for LP DB to WSBIS work area copy.	BB	Completed
2e	WSBIS schema changes	BB	Completed
2f	Structure migration utility	BB	Completed
2g	Test structure migration utility on KC structure list	BB	Completed
2h	Document clear path for structure migration given selection list.	BB	Completed
2i	Develop migration schedule and associated selection lists.	LP	10/30/15
2h.i	Verify data conditioning for all BMS elements	LP	Completed
1a	Define base requirements (WSBIS mods – esp. 1a.i, 1a.v, 1a.vi)	BB	In process
1b	Design WSBIS modifications	BB	8/24/2015
1c	Code WSBIS modifications (includes DEV testing)	BB	10/30/2015
1d	Test WSBIS modifications (LP); continue debugging/refinement.	LP	11/30/2015
1e	Implement LP modifications in WSBIS (Release to KC)	WT	12/2015
3a	Plan testing of WSBIS implementation w/var. devices, networks	BB	In process
3b	Select "early adopters" to test workstations and data migration	LP	Completed
3c	Document Office and Disconnected Client installations	BB, LP	In process
3d	Specify supported (tested/verified) platforms	WT	Completed
3e	Provide a site for download/ install of WSBIS with notes/support	LP	11/30/2015
3f	Conduct upgrade workshops if possible to migrate BW => WSBIS	WT	12/2015

[1]Highlighted items require stakeholder signoff by WT. Deliverables and sign-off for completed items to date will be made available prior to next WT meeting.

Purpose and Goals:

This is a statement of work for the integration of the existing BridgeWorks LP bridge management system into the new WSBIS bridge management system architecture currently in use by BPO. The focus of this document is technical and it is meant to serve as both a reference and repository for the duration of the work effort. This document will be reviewed and published on a basis consistent with the meetings of the WSBIS Working Team for the duration of this project.

Documents referenced in preparing this statement of work include:

Agency Engineer and Consultant Requests and Issues, 2/27/2015

BPO/HLP BridgeWorks Application Merge: Project Summary Statement, 10/30/2012

WSBIS Working Team Minutes, 3/2014.

The main goals of this integration effort, apart from the integration itself, are as follows:

1. Minimize the impact of WSBIS integration on existing inspector and agency workload and scheduling. This includes the impact of the LP migration on existing BPO operations.
2. Where possible, schedule migration activities at the convenience of the agency.
3. Assure continuity of data integrity – no loss of meaning as a result of WSBIS integration.
4. Assure equivalent functionality within WSBIS for business-essential workflow provided in previous BW system.
5. Minimize loss of (optional) desired features or functionality.
6. Provide assured path and timeframe for migration of workstation components.
7. Provide adequate notice to agency and consultant users of structure data migration activities; where possible, allow for the simultaneous (workshop-based) migration of workstation components timed to coincide with data migration.
8. Provide flexible support for both individual and "group" migration scheduling, based on the use of structure-specific migration methods/tools.
9. Provide testing scenarios which reflect the actual operating environment of agency and consultant users.
10. Where possible, conduct concurrent usage tests involving both BPO and LP users.
11. Assure NBI data submittal from BRD will continue to function normally during migration of LP data to WSBIS DB.

Phases:

The following phases or task groupings represent distinguishable elements of work:

1. Modifications to WSBIS desktop application:
    a. Define base requirements:
        i. Access DB Export in old BW: provide equivalent functionality.
        ii. Consider providing rich text capability in text box control. Need additional detail on where/how RTF is used.
        iii. Consider re-inclusion of tri-state check box to structure selection criteria; in the absence of this capability, consider a single "Not" checkbox which would be used in connection with any other options selected.
        iv. Include list of WSBIS shortcuts in Help dialog.
        v. Changes to forms associated with additional LP elements, as specified in PDF document.
        vi. *Changes associated with Load Ratings (TBD).*
    b. Design modifications to WSBIS:
        i. New LP managed operations with modified form content:
            1. INV

2. SI
    ii. Define/refine agency security provisioning in WSBIS.
       Security and access – currently, the user account and permissions structuring in BW is substantially different from that of WSBIS. The additional aspects of provisioning users in the LP environment, including the use of "master selection sets" need to be investigated and either dropped from requirements or added as modifications to WSBIS. Database tables affected are tbl6AccountRoles, tbl6ActiveAccounts, tbl6AvailableOperations, tbl6AvailableRoles, and tbl6Machines in LP BW DB.
    iii. Access DB or equivalent data export functionality.
    iv. Potential cross system modifications:
       1. Load Ratings: data entry, reporting
       2. Tri-state check box or similar functionality in selection sets.
       3. RTF usage versus data search requirements and external system usage.
       4. Inclusion of short cut list in WSBIS Help
  c. Code WSBIS modifications:
    i. DEV Testing
    ii. SVN Branching
  d. Test WSBIS modifications (LP)
    i. Debugging
    ii. Refinement
  e. Implement LP modifications in WSBIS
  f. Non-DEV WSBIS Mods:
    i. Markup of new WSBIS online reference PDF consistent with LP usage.
    ii. Inclusion of new LP fields in PDF reference?
    iii. Specifications for Load Ratings modifications.
    iv. Provide input on forms changes and initial testing/feedback.
2. Data migration:
  a. Obtain data migration strategy used to migrate BPO BW DB to WSBIS DB. (WSBIS_DataImport_BI).
  b. Plan migration of accounts and elements (including enumerated data) data before other definition and control data tables.
  c. Document differences between LP and WSBIS DB elements:
    i. Table/field differences
       1. Fields in LP/BW not present in BPO/WSBIS.
       2. Additional Load Rating fields.
    ii. BMS element differences (New Load Rating elements)
    iii. Non-BMS element differences
    iv. Control Entity/Data differences
       1. WSBIS CE/CD tables
       2. LP CE/CD tables

d. Refine strategy (2a) to account for data differences between LP data and BPO data elements (2b) and (2c). Construct stored procs, SSIS packages to load structure data from LP DB to LPImportWork DB for staging to WSBIS.

e. Refine WSBIS schema and make any changes, if necessary.

f. Using results from (2c) and (2d), develop and test a structure-specific data migration method, which would perform the following for a selected structure:

    i. Migrate Control Entity and related table data.

    ii. Migrate Control Data and related Element data, other tables as needed.

    iii. Migrate associated adjunct files. Steve K has transferred all LP files to the WSBIS TEST server area and will refresh them again as testing proceeds. They will be transferred in their entirety in a similar manner to PROD once migration begins. This avoids having to migrate physical files individually.

    iv. Assure that each structure is migrated to WSBIS only if no prior migration has been completed. This is accomplished via the tblSelectedStructures table which is updated in the work area when a structure has been successfully migrated.

    v. The "unit of work" for the structure migration utility should be the structure – either a structure migrates in its entirety to WSBIS or it fails and must be retried after correcting exception(s).

    vi. Assure that LP structures are marked as "obsolete" in LP DB once they have been migrated to WSBIS DB. When a structure is moved to the WSBIS work area (LPImportWork DB), it will be marked as obsolete in the LP DB at that time, to avoid any possibility of ambiguity.

g. Test migration based on selection sets from LP to Test WSBIS DB in multiple scenarios to be determined by Working Team. (KC-based selection set from Margaret H @ KC)

h. Document a clear path and estimated times for migration for both individual inspector and agency-wide data from LP BW DB to WSBIS DB.

i. Develop migration schedule and selection lists. (This is an LP responsibility.)

j. Conduct phased data migration activities based on agency and BPO inspection schedules.

k. Non-DEV Data Migration Tasks:

    i. Assure that all BMS data is standardized. Where possible, the intent/assumption of data migration will be to simply transfer data from LP DB to WSBIS DB – any data differences will impact this intent.

    ii. Determine selection lists of structures to be migrated from LP to WSBIS consistent with agency migration schedule.

    iii. Establish and coordinate agency migration schedules with affected agencies, BPO, and OIT to include data migration, workstation upgrades, and initial system usage.

    iv. Define a technique for converting a structure from LP to WSBIS "manually" which could be used for converting the (approx.) 300 structures where LP owns the structure but BPO has performed inspections on a contract basis. This may require DEV involvement for specific procedure development.

3. Workstation upgrades and testing:
   a. Plan test WSBIS implementation on a variety of devices (WSDOT and non-WSDOT); document results, especially issues, thoroughly. Consider both Office and Disconnected Client environments when performing workstation testing. Consider:
      i. Client (Office, Disconnected)
      ii. Network (Private, Public)
      iii. Print/Other
   b. Select a set of "early adopters" who can test the workstation and data migration procedures as thoroughly as possible prior to general deployment.
   c. Document Office and Disconnected Client installations with minimal topics list:
      i. Data migration coordination
      ii. Requirements/prerequisites (hardware, software, min level)
      iii. Pre-install actions (network, virus protection, admin privilege, etc)
      iv. Install procedure
      v. Known Issues & Install Notes
      vi. Technical assistance resource contact (email)
   d. Specify supported (tested/verified) platforms:
      i. Windows 7, 64 bit OS
      ii. Windows 8.1, 64 bit OS
   e. Provide a site for the download and installation of both the Office and Field versions of WSBIS. This site should include both the required application software and any known major component dependencies (e.g., SQL Server 2014 Express) in addition to whatever help / FAQ documents have been developed to assist in the workstation upgrade process.
   f. Conduct workstation upgrade sessions as workshops, if possible, so that inspectors and agency resources have a common opportunity to upgrade within a group setting where resources should be more available.

Because of the innate complexity of data migration, it is suggested that this element of work be staged first in the project timeline. Once the target DB schema has been finalized (2e), an LP test database can be built and WSBIS development activities in other areas can commence.